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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,391	11/09/2001	Sheng-Shing Li	PP/1-22278/P5/CGC 2069	2361

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EXAMINER

BOYD, JENNIFER A

ART UNIT

PAPER NUMBER

1771

DATE MAILED: 12/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/045,391

Applicant(s)

LI ET AL.

Examiner

Jennifer A Boyd

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 13-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 17 - 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3 pages. 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, claims 1 – 12 and 17 – 21 in the Response dated August 25, 2003 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Groups II, claims 13 – 16, has been withdrawn from further consideration.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 10 – 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 11 is rejected as being dependent on a rejected claim.

4. Claims 10 and 12 recite in the preamble “a woven or nonwoven fabric”, however, in the body of both claims, it is recited that the fabric can be a knit. The contents of the preamble do not correspond with the contents of the remainder of the claim because a knitted material is not a type of woven or nonwoven fabric. For the purpose of examination, the Examiner will assume that the Applicant intends that the fabric can be a woven, nonwoven or a knit.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

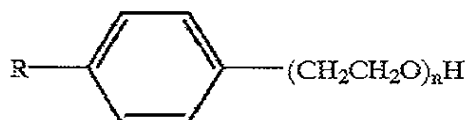
A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claim rejected under 35 U.S.C. 102(e) as being anticipated by Mor et al. (US 6,146,757).

Mor is directed to wettable polymer fibers, compositions for preparing the same and articles made therefrom (Title).

As to claims 1 and 3 - 4, Mor teaches a wettable fiber or filament having a thermoplastic polymer and a first wetting agent (column 7, lines 65 – 67 and column 8, lines 1 – 5). Mor teaches that the preferred thermoplastic polymer is a polyolefin (column 9, lines 65 – 67). Mor teaches that the first wetting agent is preferably an ethoxylated alkylphenol having the following structure:



wherein n is a number from about 1 to about 10 and R is an alkyl group having from about 8 to about 22 carbon atoms (column 8, lines 20 – 45). Mor notes that n represents an average value as the length of the polyalkoxy chain can vary somewhat from molecule to molecule (column 8, lines 40 – 48). It should be noted that the structure $(\text{CH}_2\text{CH}_2\text{O})_n$ is equated to Applicant's

“ethylene oxide” and the alkyl group of R is equated to Applicant’s “straight or branched chain alkyl”.

As to claim 2, Mor teaches that the thermoplastic polymer is preferably a polyolefin such as polyethylene or polypropylene (column 10, lines 1 – 5).

As to claims 5 and 6, Mor teaches that the fibers or filaments can comprise two or more of the first wetting agent (column 11, lines 65 – 67). Mor teaches that the first wetting agent can have 8 to 22 carbon atoms on average and about 1 to 10 ethylene oxide units (column 8, lines 20 – 33). Therefore, in one embodiment, one first wetting agent has a certain carbon atom average and number of ethylene oxide units and the second first wetting agent can have a different carbon atom average and number of ethylene oxide units.

As to claims 7 and 8, Mor teaches the fibers or filaments contain about 1 to about 20 percent by weight of a combination of the first wetting agent and a second wetting agent. Therefore, the first wetting agent would be present in the amount of less than 20 percent by weight of the fiber or filament.

As to claim 9, Mor teaches that the composition comprising the thermoplastic polymer and a first wetting agent can be a blend component for other fibers, equated to Applicant’s “bicomponent fiber”.

As to claims 10 - 12, Mor teaches that the composition can be in form of a woven, nonwoven or knitted fabric (column 13, lines 28 – 33) made of preferably a polyolefin such as polyethylene or polypropylene (column 10, lines 1 – 5).

As to claim 17, Mor teaches that the fiber or filaments of the invention can be used in products such as diaper inner liners, battery cell separators and filters (column 13, lines 1 – 10).

As to claims 18 and 20, Mor teaches a wettable fiber or filament having a thermoplastic polymer, a first wetting agent and a second wetting agent (column 7, lines 65 – 67 and column 8, lines 1 – 5). The Examiner equates the second wetting agent to Applicant's "additional melt blend component". Mor teaches that the second wetting agent can comprise a polyalkylene-modified polysiloxane (column 8, lines 29 – 53). It should be noted that the second wetting agent comprises a polysiloxane which would make the composition not of formula (I) as required by the Applicant. Mor teaches that the polyalkylene can be an alkoxyated fatty alcohol such as stearyl alcohol (column 9, lines 35 – 40). It should be noted that the compound can be considered to be aliphatic because it is not aromatic.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mor et al. (US 6,146,757).

Mor teaches a wettable fiber or filament having a thermoplastic polymer, a first wetting agent and a second wetting agent (column 7, lines 65 – 67 and column 8, lines 1 – 5). The Examiner equates the second wetting agent to Applicant's "additional melt blend component". Mor teaches that the second wetting agent can comprise a polyalkylene-modified polysiloxane (column 8, lines 29 – 53). It should be noted that the second wetting agent comprises a

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polysiloxane which would make the composition not of formula (I) as required by the Applicant. Mor teaches that the polyalkylene can be an alkoxyated fatty alcohol such as stearyl alcohol (column 9, lines 35 – 40). It should be noted that the compound can be considered to be aliphatic because it is not aromatic.

Mor discloses the claimed invention except for that the additional component of ethoxylated stearyl alcohol to the melt blend is present in the amount of 2 moles. It should be noted the amount of moles of ethoxylated stearyl alcohol used in the composition is a result effective variable. For example, as the amount of additional component of ethoxylated stearyl alcohol increases, the fiber comprising the composition will have improved surface properties. It would have been necessary and obvious to optimize the amount of additional component used in the composition in order to successfully practice the invention of Mor and since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have been motivated to optimize the amount of ethoxylated stearyl alcohol in order to create a composition have the desired surface properties.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A Boyd whose telephone number is 703-305-7082. The examiner can normally be reached on Monday thru Friday (8:30am - 6:00pm).

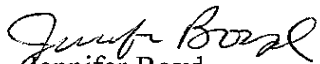
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

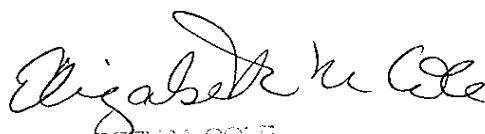
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Jennifer Boyd
November 12, 2003


ELIZABETH M. COLE
PRIMARY EXAMINER